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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,345	09/24/2001	Yukihiro Kusano	Q65935	4619

7590 04/26/2007
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EXAMINER

CHRISS, JENNIFER A

ART UNIT	PAPER NUMBER
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1771

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/26/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.		Applicant(s)	
	09/960,345		KUSANO ET AL.	
	Examiner		Art Unit	
	Jennifer A. Chriss		1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Declaration and Arguments

1. The Second Supplemental Declaration under 37 CFR 1.132 filed on October 10, 2006 is insufficient to overcome the rejection of claims 6-9 based upon rejection under 35 U.S.C. 103(a) over JP 10-053010 in view of YOSHIKAWA et al. (US 4,872,932) as set forth in the last Office action because: The photos submitted with the response dated 1/10/07 are of poor quality. Although the quality is better than the previous submission, the Examiner cannot rely on these as evidence. The Applicant indicates that the contact area of the non-woven fabric of tire B is smaller than the contact area of tire A. The quality and the angle of the photo cannot verify this assertion. Furthermore, in regards to photo VI of tire A and tire B, the Applicant has not provided a scale for either of the photos. Therefore, it is not clear that the photos were taken at the same scale. Tire B could appear to have more damage than tire A depending on the scale used in both of the photos. Therefore, the Examiner is not able to consider all the evidence showing the unexpectedly superior results argued by Applicants. As suggested previously, Applicants are advised to submit the photos as an artifact to the case, so that they are available in their original form during the examination of the application. Furthermore, it is suggested that the Applicant also provide measurements and other numerical data to support the alleged findings shown in the photos. Applicant's arguments filed January 10, 2007 depend on the submitted Declaration under 1.132, but as explained above, the Examiner was not able to fully examine the

evidence provided. Therefore, the rejection of claims 6-9 are maintained herein for the reasons of record.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6-9 are rejected under 35 U.S.C. 103(a) as being obvious over JP 10-053010 in view of YOSHIKAWA et al. (US 4,872,932) as stated in previous office action.

The JP 10-053010 reference teaches the use of unwoven fabric (non-woven fabric) in a rubber-filament complex of a fiber reinforced member layer in a pneumatic radial tire. (Abstract) Figure 1 shows a tire structure that includes a fiber reinforcement member layer 8a, 8b between the carcass layer 2 and sidewall rubber 7a, 7b. [0024] The JP'010 reference uses a conjugation of a non-vulcanized rubber composition for fiber, teaches using solvents and also methods that involve providing a tackiness (adhesive) to the nonwoven fabric. The reference teaches that when adhesion is inadequate, it is sufficient to perform dipping heat-setting processing to a filament fiber like the case where the adhesive power of the fiber cord for tires and rubber is heightened [0022]-[0023]

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The JP'010 fails to teach that rubber is adhered to the nonwoven of the reinforcement layer by coating the nonwoven with a metal or metallic compound by PVD or CVD.

YOSHIKAWA et al. discloses a method for preparing rubbery composite materials and teaches that a metal such as zinc, copper, cobalt, and an alloy thereof can be integrated into a rubber composition to form a rubbery composite material exhibiting a firm bond between the components by press bonding the metal at a temperature which approximate to the temperature at which the rubber composition is usually heated for vulcanization; that these material can be readily deposited on a substrate as a thin film by a dry plating process such as vacuum deposition, ion plating, DC and RF magnetron sputtering, bipolar sputtering and RF sputtering processes; and that a rubber composition can firmly bond to the resulting metal thin film. (See Column 3 lines 34-45) The Yoshikawa et al. reference discloses that methods that involve adhesive bonding pose problems including coating consideration such as adherent pretreatment and adhesive maintenance, problems with the use of solvents, among others. (Col. 1, lines 54 through Col. 2, lines 1-54) The reference further teaches that the substrates that can be used in the practice of their invention are not particularly limited with respect to their material type, shape, and size, and that these may be properly selected depending on the intended application. (See Column 5, lines 18-41) Further, the reference teaches that the rubbery composite materials of their invention will find wide applications in steel tires, conveyor belts, and hoses, among others. (Column 4, lines 62-64)

Since both references are directed to materials used in the tire industry, the purpose disclosed by '932 would have been recognized in the pertinent art of JP'010.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the reinforcement layer and substitute it with the composite material of '932 in which the nonwoven is treated by PVD to adhere the rubber coating motivated by the desire of improving the adherence of the composite without the need of adhesive material or solvents as taught by the '932 (above).

Conclusion


THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Chriss whose telephone number is 571-272-7783. The examiner can normally be reached on Monday - Friday 8 am - 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 571 - 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Jennifer Chriss
April 20, 2007


Ms. Arti R. Singh
Primary Examiner
Tech Center 1700